

Non-Contact Temperature Measurement

MAURER – INFRARED – RADIATION THERMOMETER

Temperature range -20 to 1000°C (-4 - 1832°F)

**Temperature control during production process in only 5 msec.
compact units – Infrared – measuring transducer and electronic process
unit in one case with light beam aiming device**

Series KTR 2100



MAURER – Infrared – radiation thermometer can also assist you to monitor your heating processes, ensuring a uniform standard of quality for your products.

leaflet KTR 2100

<http://www.maurer-ir.de>

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Infrared Radiation Thermometer Series KTR 2100

The non-contact temperature registration in the measuring technique is unthinkable without it. The **KTR 2100** is placing new standards in the **low temperature measuring technique** for non-metallic surfaces. It's developed with latest findings and manufactured in **up-dated technology**. Through the approved chopper system a very efficient long-term stability and low-sensitivity contrary to temperature-shocks is achieved. In view of a response time of **only 5 msec.** this thermometer is also useable for high-speed measuring applications. For exact adjustment to the measuring point a **light beam aiming device** is available for **short** measuring distances - for **longer** measuring distances a **light beam aiming device with laser**.

Examples for application:

ceramics, rubber, paper, wood, food, asphalt, building material, electronic components, plastics, plastics deep-drawing, lacquering drying, drying process.

unit types	target marking
KTR 2100	without
KTR 2100-1	light beam aiming device
KTR 2100-1 L	light beam aiming device/Laser

Temperature-Measuring - range - linear -

No.	Meas. - range
1	-20 - 100°C (-4 - 212°F)
2	0 - 100°C (32 - 212°F)
3	0 - 200°C (32 - 392°F)
4	0 - 300°C (32 - 572°F)
5	0 - 400°C (32 - 752°F)
6	0 - 500°C (32 - 932°F)
7	0 - 800°C (32 - 1472°F)
8	100 - 1000°C (212 - 1832°F)

(special meas. range on request)

Technical Data

Measuring range	-20 - 1000°C (-4 - 1832°F)
Spectral range	8 - 14 µm
Response time	0,005 - 0,5 s
Accuracy	1 % ± 1°C
Reproducibility	3 ‰
Emissions factor	100 - 10 %
Working temperature	0°C - 50°C (32 - 122°F)
stock temperature	-10°C - + 70°C (14 - 158°F)
Temperature- sensitivity	0,05 % / °C
Humidity tolerance	35 - 85 % RF
Output (choiceable)	0 - 20 mA
	4 - 20 mA
	0 - 10 V
Operating voltage	DC 24 V ± 10 %
	AC 24 V ± 10 %
Current input	approx. 300 mA
Unit connection	5 - pole socket
Dimensions H / B / D	54 x 54 x 171 mm (2,13x2,13x6,73 inch)
Weight	0,6 kg (1,32 lbs)
Protection grade	IP 65

Objectives:

For accommodation to the measuring application are several objectives and optics systems available.

Options: - built-in digital display

scanner	electronic process unit	electrical assembly	mechanical assembly
SC 1010	AE 1010	- digital display	- units with cooling case
SC 1012	AE 1012	- 2 contact outputs	- blowing device
		- interface RS 232 o.s.	- mirror 90°
		- power supply 230V/AC - 24 V/DC	- mounting parts

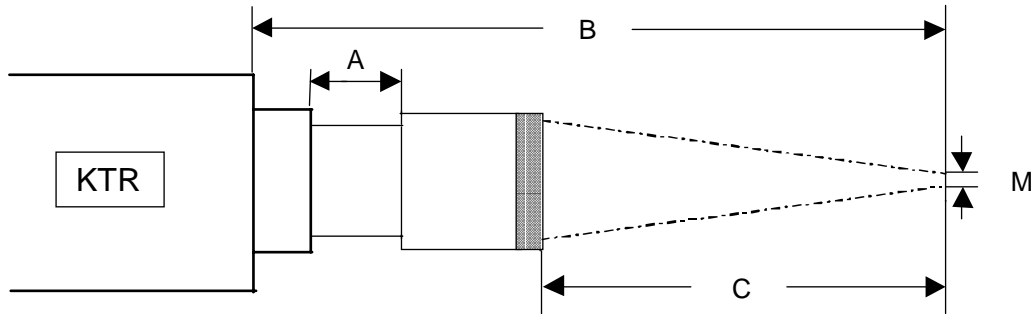
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Reg.-Nr.: Q1 0201014

Optic tables for KTR 2100



Optic-type	: IR 2040-N (ZnSe)		
Lens	: f 1,5" Ø =1"		
Meas. aperture	: 1,0 mm Ø		
Meas. distance from casing of meas. head B / mm	Meas. distance from optic front edge C / mm	Optic extension A / mm	Target size M / mm=d
140	102	13,0	2,5
150	112,8	12,2	2,7
200	168,2	6,8	4,2
250	220,3	4,7	6,1
300	271,3	3,7	8,5
400	372,3	2,7	11,3
500	473	2,0	14,4
600	573,6	1,4	17,5
700	674,1	0,9	21,0
800	774,5	0,5	25,0

Optic-type	: IR 2060-T		
Lens	: f 2,5" Ø =1"		
Meas. aperture	: 1,0 mm Ø		
Meas. distance from casing of meas. head B / mm	Meas. distance from optic front edge C / mm	Optic extension A / mm	Target size M / mm=d
370	310	13,0	5,2
400	342	11,0	6,0
500	445,5	7,5	7,7
600	547,5	5,5	9,6
700	648,8	4,2	11,8
800	749,6	3,4	13,6
900	850,3	2,7	15,0
1000	950,8	2,2	17,5
1500	1452,2	0,8	27,5
2000	1952,7	0,3	38,0
3000	2953	0,0	55,0

Target=98 % of beam density of the surface

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